OhioEPA
State of Ohio Environmental Protection Agency
Southwest District Office
401 East Fifth Street
Dayton, Ohio 45402-2911
(513) 285-6357
FAX (513) 285-6249

George V. Voinovich
Governor

December 3, 1999

Mr. Johnny Reising
U.S. DOE FEMP
P.O. Box 398705
Cincinnati, OH 45329-8705

RE: COMMENTS ON THE PROPOSED CHANGES RESULTING FROM THE 1999 ANNUAL REVIEW OF THE INTEGRATED ENVIRONMENTAL MONITORING PLAN

Dear Mr. Reising:

Ohio EPA has reviewed the proposed changes resulting from *The 1999 Annual Review of the Integrated Environmental Monitoring Plan* submitted by DOE. This letter provides, as an attachment, the comments from the Ohio EPA.

If there are any questions, please contact me at (937) 285-6466 or Donna Bohannon at (937) 285-6543.

Sincerely,

Tom Schneider

for Thomas A. Schneider
Fernald Project Manager
Office of Federal Facilities Oversight

cc: Jim Saric U.S. EPA
Terry Hagen, Fluor Daniel Fernald
Francis Hodge, Tetratech
Ruth Vandegrift, ODH
Mark Schupe, HSI Geotrans
Manager TPSS, DERR

Q:\femp\OU5\IEMP\IEMPCH~1.wpd

COMMENTS ON THE TRANSMITTAL OF PROPOSED CHANGES RESULTING FROM THE 1999 ANNUAL REVIEW OF THE INTEGRATED ENVIRONMENTAL MONITORING PLAN

1) Commenting Organization: OEPA Commentor: HSI GeoTrans, Inc.
Section #: Summary Table, Row 1 Pg.#: 3 Line #: NA Code: C
Original Comment #:
Comment: Based on inspection of the historical total uranium analysis results from wells 2434, 2544, 2880, 2881, 3880, 3881, and 21194, these wells are not positioned at the correct depth to monitor the uranium plume and therefore can be removed from the South Plume Module. As indicated in the technical information portion of Row 1 of Page 3 of the Summary Table, Monitoring Wells 6880 and 6881 have been installed to better define the leading edge of the South Plume. Direct push data substantiating the assertion that these wells are screened at the correct depths for plume monitoring should be provided via quarterly IEMP reporting.

2) Commenting Organization: OEPA Commentor: HSI GeoTrans, Inc.
Section #:Summary Table, Row 5 Pg.#: 3 Line #: NA Code: C
Original Comment #:
Comment: It is understood that wells need to be removed in order to proceed with remediation-related construction activity. The three wells marked for abandonment, however, are important for delineating the total uranium plume in the waste storage area, particularly 2033 and 2034. Total uranium concentrations in these wells were 72.3 and 14.4 ug/L, respectively, in 4Q98. As the proposed change results in a 20 percent reduction in the groundwater monitoring capacity in the waste storage area, DOE should propose alternative wells to compensate for this loss. Maintaining a viable monitoring network in waste storage area is important for monitoring the effects of the Waste Pits Remedial Action Project on the total uranium plume in this portion of the site.

3) Commenting Organization: OEPA Commentor: HSI GeoTrans, Inc.
Section #:Summary Table, Row 1 Pg.#: 4 Line #: NA Code: C
Original Comment #:
Comment: DOE should continue to monitor the Type 3 wells. The water level data generated are important for demonstrating capture of the deeper portions of the plume. Based on 1Q99 data, four Type 3 wells (not including the South Plume Extraction Module wells) have total uranium concentrations that significantly exceed the FRL. The concentrations in 3014, 3069, 3095, and 3125 range from 41 to 331 ug/L. At a minium, DOE should continue monitoring all Type 3 wells that fall within the 20 ug/L plume footprint plus some buffer distance (for example, 200 ft). By our estimation, this would include 38 wells compared to the 63 wells that are currently monitored for water levels,

2662

as shown on Page 3-49 of the Integrated Environmental Monitoring Plan.

4) Commenting Organization: OEPA Commentor: HSI GeoTrans, Inc.
Section #: Summary Table, Row 3 Pg.#: 4 Line #: N/A Code: C
Original Comment #:
Comment: Although the boroscope data has been problematic for interpretation of groundwater flow conditions in the Great Miami Aquifer, the device has been very useful as an independent line of evidence regarding the boundary of the capture zone for the South Plume Remediation Module. Often the evidence is inconclusive and reasonable reviewers will differ in its interpretation. Rather than complete abandonment of flow direction sensing, DOE should propose alternative technologies or alternative approaches for use of the boroscope. For example, although (as indicated in Attachment 3) the boroscope provides very localized information regarding tortuous groundwater flow paths, simultaneous (in a single day) boroscope measurements in a large number of wells would provide stronger evidence for the flow direction claims that are made. This monitoring activity could be conducted on, for example, an annual basis or when a significant change in extraction rates/locations is implemented. Currently, because so few wells are monitored with the boroscope, the localized deviations from the average flow direction do tend to confound interpretation. Simultaneous measurements in a large number of wells would average out these localized deviations.

5) Commenting Organization: Ohio EPA Commentor: DSW
Section #: Attachment 1 Pg #: 4 Line #: STRM 4005 Code: E
Original Comment #:
Comment: This states that sample location STRM 4005 had 31 sample results and Table A-1 shows 33 results for STRM 4005. Were the 33 results in Table A-1 used or were only 31 results used as indicated in this section?

6) Commenting Organization: Ohio EPA Commentor: DSW
Section #: Attachment 1 Pg #: 4 Line #: STRM 4005 Code: C
Original Comment #:
Comment: We cannot agree that the sample result of 170 μg/L can be discounted as an outlier. No data point should be rejected as an outlier if it is reasonably likely to be a valid result. This is not the case with the sample from STRM 4005. This is located in the pilot plant drainage ditch which has had levels of total uranium over 2000 μg/L as recently as

1996. Although the sump was installed, it is plausible to have a result of 170 μg/L in 1997. In addition this drainage also receives flow from the construction of the road around the silos and the activity around the loading of the first soil pile into the rail cars at the waste pits. In short, a result of 170 μg/L is not unlikely at this location. According to USEPA, if an observation is statistically determined to be an outlier, the EPA suggests determining an explanation for this outlier before its exclusion from further analysis (US EPA, 1992). If an explanation cannot be found, then the observation should be treated as an extreme but valid measurement and it should be in further analysis (US EPA, 1992). (Environmental Protection Agency.: 1992, Statistical Training Course for Ground-Water Monitoring Data Analysis, EPA/530-R-93-003, Office of Solid Waste, Washington, DC.) This data point should be included in the analysis.

7) Commenting Organization: Ohio EPA Commentor: DSW
Section #: Attachment 1 Pg #: 8-9 Line #: Table A-1 Code: C
Original Comment #:
Comment: This table appears to contain data that was never submitted to Ohio EPA. The data received by Ohio EPA (1997, 1998, and 1999 to date) has 16 results for total uranium from STRM 4005, one result for total uranium from STRM 4006 and no total uranium results for STRM 4003 or STRM 4004. This table shows six total uranium samples for STRM 4003, five for STRM 4004, 33 for STRM 4005, and seven for STRM 4006. Why was this data never included in the data sent to Ohio EPA?